**REQUIREMENTS FOR PRECISION FARMING**
**NUTRIENT MANAGEMENT INCENTIVE**
**TENNESSEE**

**Environmental Quality Incentives Program (EQIP) FY 2008**

**Purpose:** To encourage the adoption of variable-rate application of nutrients and using maps to record soil sampling, soil test recommendations, nutrient applications, and yield. The Tennessee Nutrient Management (590) standard will be followed in the application of this practice.

**Eligible Land**: Cropland producing annually planted crops.

**Maximum Acres:** Maximum of 300 acres per year for 3 years

**Payment Schedule:** Payments for this incentive will be front loaded and can be paid after certification by NRCS that all requirements are met the first year. The rates below are annual rates that will be multiplied by 3 after all requirements are met. No payments will be made if all requirements are not met. Repayment of funds will be strictly enforced if all requirements are not met for the additional 2 years.

Payment schedule rates:

a. EC machine generated soil sampling zones, soil testing, and GIS guided variable rate application of nutrients according to guidance below - $6.00 per acre
b. Non-EC machine generated soil sampling zones, soil testing, variable rate application of nutrients, variable rate plant populations, variable rate nitrogen, and yield monitoring by manually recording from harvesting equipment according to guidelines below. The data collection, variable nutrient application, variable planting rate, and yield monitoring are all manually recorded and documented to maps - $8.00 per acre
c. EC machine generated soil testing zones, soil testing, GIS guided and recorded variable rate application of nutrients, and GIS recorded yield monitoring according to below: $12.00 per acre

**Producer requirements for payment:**

1. **A soil test analysis is required from a certified lab (University of Tennessee or A&L Laboratories)**

   a. Soil test according to Electrical Conductivity (EC) machine data (different soil types/zones) **OR** *samples should be collected on no more than 10 acre maximum units*. Areas of contrasting soils, problem spots or portions of fields where yields are significantly different should

be sampled separately provided the area can be fertilized separately. Examples: bottomland, sloping land, and upland.

b. Take the soil samples during the same season (typically fall) in year 1 and year 3 so a trend can be monitored.

c. All sample grids or contrasting soil types/zones will be set by GPS points by the EC machine or digitized into a map from GPS readings.

d. For $8.00 payment non-EC machine zone soil test are taken based on soil grids (e.g. bottomland, terrace, and upland). Maximum 10 ac units. Soil sample grids must be approved by NRCS prior to implementation of the other components of the practice.

2. **Apply lime as required by soil test.** Lime requirements must be applied the first year.

3. **Apply fertilizer by soil test recommendations according to realistic yield goals.** Realistic yield goals (average of 3 out of 5 years) will be indicated on the soil sample form and submitted to a soils lab with the sample.

4. **Develop a conservation plan on the acres receiving nutrients with the nutrient management as a component.** In most cases there will be other conservation practices included as part of the conservation plan. Other practices needed to bring the land unit into a resource management system must be included in the conservation plan. The nutrient management incentive payment is used to move individuals into a Resource Management Systems (RMS). The required planned components are as follows:

    a. Erosion to tolerance “T” levels for the crop rotation(determined by NRCS)
    b. Positive soil conditioning index for the crop rotation (determined by NRCS)
    c. All blue line streams on a quad map adjacent to the treated crop fields must be currently established or planned for establishment of a buffer the first year of the contract. (35 ft. min buffer width on cropped sides of the stream) – planned by NRCS.
    d. Apply practices needed to mitigate pest management requirements (NRCS Pest Management (595) standard) as determined by the NRCS conservation planner.

5. **Recordkeeping is essential for payment:**

    ***Soil sampling, fertilizer and lime applications, and yields are documented in the GIS system for the $6.00 and $12.00 payments.***

***Soil sampling, fertilizer and lime applications, variable seeding rates, and yields are recorded on grid maps for the $8.00 payment.***

The following are required documentation to be provided based on the level of incentive payment:

a. Nutrient recommendation (soil test results) maps for each field, and written certification that fertilizer and lime has been applied according to the recommendation map(s). As applied (as spread) maps will be accepted in lieu of written certification. Certifications or as-applied maps shall be dated. Yields will be estimated for different application areas. Payment will be made after certification records have been received. ($6.00 per acre)
b. The above certification (5a.) plus grid maps indicating variable seeding rates, variable nutrient rates, and dated yield monitoring. Payment will be made after harvest and maps are received. ($8.00 per acre)
c. The above certification (5a.) plus dated GIS yield monitoring maps with the appropriate legend are to also be submitted for the higher incentive payment. This map compares nutrient application rate to yield. Payment will be made after harvest and certification maps are received. ($12.00 per acre)

6. **A maximum of 300 acres is allowed for the incentive payments for 3 years.** In the case where an individual person has interest in two or more operations, the individual is limited to receiving payment on no more than 300 acres.